

| | | | | | | | | | | | | | | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 5' | 9 | GAC | GTG | TTT | GGC | AGC | GGG | ACG | CAC | CAT | 27 | TTC | AGT | TGT | 36 | GTT | CTT | GGT | 45 | TCA | TTT | CGT | 54 |
| | 63 | GTC | TCG | GCG | ATG | TTT | CCT | AGA | GTC | TCG | ACG | TTC | CTA | CCT | CTT | CGC | CCC | CTT | 108 | TCC | | | |
| | | | | | M | F | P | R | V | S | 81 | T | F | L | P | L | R | P | 99 | L | S | | |
| | 117 | CGC | CAC | CCT | TTG | TCC | TCT | GGA | AGC | CCG | 135 | GAG | ACA | TCA | GCG | GCT | GCG | ATT | 153 | ATG | CTA | | |
| | | R | H | P | L | S | S | G | S | P | 180 | E | T | S | A | A | A | I | 207 | M | L | | |
| | 171 | CTC | ACT | GTT | CGG | CAC | GGA | ACA | GTC | AGG | 189 | TAC | CGC | AGT | TCA | GCG | CTG | TTG | 216 | GCC | CGG | | |
| | | L | T | V | R | H | G | T | V | R | 243 | Y | R | S | S | A | L | L | 261 | A | R | | |
| | 225 | ACA | AAA | AAT | AAC | ATC | CAA | AGA | TAT | TTT | 252 | GGC | ACT | AAC | AGT | GTG | ATC | TGT | 270 | AGC | AAG | | |
| | | T | K | N | N | I | Q | R | Y | F | 297 | G | T | N | S | V | I | C | 315 | S | K | | |
| | 279 | AAA | GAT | AAG | CAG | TCT | GTT | CGA | ACT | GAG | 306 | GAG | ACT | TCC | AAG | GAG | ACT | TCA | 324 | GAG | AGC | | |
| | | K | D | K | Q | S | V | R | T | E | 351 | E | T | S | K | E | T | S | 369 | E | S | | |
| | 333 | CAA | GAC | AGT | GAA | AAG | GAA | AAT | ACG | AAA | 360 | GAC | TTG | TTA | GGC | ATT | ATT | AAG | 378 | GGC | | | |
| | | Q | D | S | E | K | E | N | T | K | 360 | D | L | L | G | I | I | K | 378 | G | | | |

FIGURE 1A

| | | | | |
|-----|---|-----|-----|-----|
| 387 | ATG AAA GTT GAA TTA AGC ACA GTA AAT GTA CGA ACA ACA AAG CCC CCC AAA AGA | 414 | 423 | 432 |
| | M K V E L S T V N V R T T K P P K R | | | |
| 441 | AGA CCA CTT AAA AGT TTG GAA GCT ACA CTT GGC AGG CTT CGA AGA GCT ACA GAA | 468 | 477 | 486 |
| | R P L K S L E A T L G R L R A T E | | | |
| 495 | TAT GCT CCA AAG AAG AGA ATT GAG CCC CTG AGT CCT GAG TTG GTG GCA GCT GCA | 522 | 531 | 540 |
| | Y A P K K R I E P L S P E L V A A | | | |
| 549 | TCT GCT GTG GCA GAT TCT CTC CCT TTT GAT AAG CAA ACA ACC AAG TCA GAG CTG | 576 | 585 | 594 |
| | S A V A D S L P F D K Q T T K S E L | | | |
| 603 | CTG AGC CAG CTC CAG CAG CAT GAG GAA GAG TCA AGG GCA CAG AGA GAT GCA AAG | 630 | 639 | 648 |
| | L S Q L Q Q H E E S R A Q R D A K | | | |
| 657 | CGA CCT AAA ATT AGT TTC AGT AAC ATA ATA TCA GAT ATG AAA GTT GCC AGA TCT | 684 | 693 | 702 |
| | R P K I S F S N I I S D M K V A R S | | | |
| 711 | GCT ACA GCT AGA GTT CGT TCA AGA CCA GAG CTT CGG ATT CAG TTT GAT GAA GGC | 738 | 747 | 756 |
| | A T A R V R S R P E L R I Q F D E G | | | |

FIGURE 1B

| | | | | | |
|---|------|------|------|------|------|
| 765 | 774 | 783 | 792 | 801 | 810 |
| TAT GAC AAT TAT CCT GGC CAG GAG AAG ACG GAT GAT CTT AAA AGG AAA AAT | | | | | |
| Y D N Y P G Q E K T D D L K K R K N | | | | | |
| 819 | 828 | 837 | 846 | 855 | 864 |
| ATA TTC ACA GGG AAA AGA CTT AAT ATT TTT GAC ATG ATG GCA GTT ACT AAA GAA | | | | | |
| I F T G K R L N I F D M M A V T K E | | | | | |
| 873 | 882 | 891 | 900 | 909 | 918 |
| GCA CCT GAA ACA GAC ACA TCA CCT TCA CTT TGG GAT GTG GAA TTT GCT AAG CAG | | | | | |
| A P E T D T S P S L W D V E F A K Q | | | | | |
| 927 | 936 | 945 | 954 | 963 | 972 |
| TTA GCC ACA GTA AAT GAA CAA CCC CTT CAG AAT GGA TTT GAA GAG CTG ATC CAG | | | | | |
| L A T V N E Q P L Q N G F E L I Q | | | | | |
| 981 | 990 | 999 | 1008 | 1017 | 1026 |
| TGG ACA AAA GAG GGG AAA CTA TGG GAG TTC CCA ATT AAC AAT GAA GCA GGT TTT | | | | | |
| W T K E G K L W E F P I N N E A G F | | | | | |
| 1035 | 1044 | 1053 | 1062 | 1071 | 1080 |
| GAT GAT GAT GGT TCA GAA TTT CAT GAA CAT ATA TTT CTG GAG AAA CAC CTG GAG | | | | | |
| D D D G S E F H E H I F L E K H L E | | | | | |
| 1089 | 1098 | 1107 | 1116 | 1125 | 1134 |
| AGC TTT CCA AAA CAA GGA CCA ATT CGC CAC TTC ATG GAG CTG GTG ACT TGT GGC | | | | | |
| S F P K Q G P I R H F M E L V T C G | | | | | |

FIGURE 1C

| | | | | | |
|---|------|------|------|------|------|
| 1143 | 1152 | 1161 | 1170 | 1179 | 1188 |
| CTT TCC AAA AAC CCA TAT CTT AGT GTT AAA CAG AAG GTT GAA CAC ATA GAG TGG | | | | | |
| L S K N P Y L S V K Q K V E H I E W | | | | | |
| 1197 | 1206 | 1215 | 1224 | 1233 | 1242 |
| TTT AGA AAT TAT TTT AAT GAA AAA AAG GAT ATT CTA AAA GAA AGT AAC ATA CAG | | | | | |
| F R N Y F N E K K D I L K E S N I Q | | | | | |
| 1251 | 1260 | 1269 | 1278 | 1287 | 1296 |
| TTC AAT TAA GAC CAT GGA AAT TTT TAT TTC AAA CAA TTA GAG ATG GAT ATT ACA | | | | | |
| F N | | | | | |
| 1305 | 1314 | | | | |
| ACT AAA TAA AAT AAT TGC 3' | | | | | |

FIGURE 1D

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------|------------|------------|
| 1 | M | F | P | R | V | S | T | F | L | P | L | R | P | L | S | R | H | P | L | S | S | G | S | P | E | T | S | A | A | A | I | M | L | L | T | V | R | H | G | T | 035842 |
| 1 | M | L | H | R | I | P | A | F | L | R | P | R | P | F | S | G | L | P | L | S | C | G | N | R | D | V | S | V | A | - | - | V | L | P | A | A | Q | S | G | A | GI 1272669 |
| 41 | V | R | Y | R | S | S | A | L | L | A | R | T | K | N | N | I | Q | R | Y | F | G | T | N | S | V | I | C | S | K | K | D | K | Q | S | V | R | T | E | E | T | 035842 |
| 39 | V | R | - | - | - | - | - | - | - | - | T | E | N | N | I | Q | R | H | F | C | T | S | R | S | I | C | S | K | K | V | D | Q | S | V | P | A | N | E | I | GI 1272669 | |
| 81 | S | K | E | T | S | E | S | Q | D | S | E | K | E | N | T | K | K | D | L | L | G | I | I | K | G | M | K | V | E | L | S | T | V | N | V | R | T | T | K | P | 035842 |
| 70 | S | Q | K | A | E | S | Q | G | R | G | K | E | T | L | K | K | D | L | L | D | I | I | K | D | M | K | V | D | L | S | T | A | N | V | K | T | P | K | P | GI 1272669 | |
| 121 | P | K | R | R | P | L | K | S | L | E | A | T | L | G | R | L | R | R | A | T | E | Y | A | P | K | K | R | I | E | P | L | S | P | E | L | V | A | A | A | S | 035842 |
| 110 | R | G | R | K | P | S | A | S | L | E | A | T | V | D | R | L | Q | K | A | P | E | D | P | P | K | K | R | N | E | F | L | S | P | E | L | V | A | A | A | S | GI 1272669 |
| 161 | A | V | A | D | S | L | P | F | D | K | Q | T | T | K | S | E | L | L | S | Q | L | Q | Q | H | E | E | S | R | A | Q | R | D | A | K | R | P | K | I | S | 035842 | |
| 150 | A | V | A | D | S | L | P | F | D | K | Q | T | T | K | S | E | L | L | R | Q | L | Q | Q | H | E | E | L | R | A | Q | K | D | R | E | K | R | R | I | S | GI 1272669 | |
| 201 | F | S | N | I | I | S | D | M | K | V | A | R | S | A | T | A | R | V | R | S | R | P | E | L | R | I | Q | F | D | E | G | Y | D | N | Y | P | G | Q | E | K | 035842 |
| 190 | F | T | H | I | I | S | N | M | K | I | A | K | S | P | S | G | R | A | S | T | R | P | Q | H | Q | I | Q | F | D | E | D | M | D | S | S | L | K | Q | E | K | GI 1272669 |
| 241 | T | D | D | L | K | K | R | K | N | I | F | T | G | K | R | L | N | I | F | D | M | M | A | V | T | K | E | A | P | E | T | D | T | S | P | S | L | W | D | V | 035842 |
| 230 | P | T | D | F | R | K | R | K | Y | L | F | K | G | K | R | L | S | I | F | A | D | K | A | F | A | D | E | P | P | E | A | S | P | S | L | W | E | I | GI 1272669 | | |
| 281 | E | F | A | K | Q | L | A | T | V | N | E | Q | P | L | Q | N | G | F | E | E | L | I | Q | W | T | K | E | G | K | L | W | E | F | P | I | N | N | E | A | G | 035842 |
| 270 | E | F | A | K | O | L | A | S | V | A | D | Q | P | F | E | N | G | F | E | E | M | I | Q | W | T | K | E | G | K | L | W | E | F | P | V | N | N | E | A | G | GI 1272669 |

FIGURE 2A

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------|
| 321 | F | D | D | D | G | S | E | F | H | E | I | F | L | E | K | H | L | E | S | F | P | K | Q | G | P | I | R | H | F | M | E | L | V | T | C | G | L | S | K | 035842 |
| 310 | L | D | D | D | G | S | E | F | H | E | I | F | L | D | K | Y | L | E | D | F | P | K | Q | G | P | I | R | L | F | M | E | L | V | T | C | G | L | S | K | GI 1272669 |

NPYLSVKQKV E H I E W F R N Y F N E K K D I L K E S N I Q F N 035842
NPYLSVKQKV E H I E W F R N Y F N E K K R D I L K E S N I A F T GI 1272669

FIGURE 2B